CLAIMS

What is claimed is:

1. A slider assembly for use in a data storage system, comprising:

a slider having an air bearing surface and a metalized backside;

a flexure secured to the slider along the slider backside, and formed of a plurality of layers;

a plurality of receptacles that are formed in a pattern, through at least a first layer of the flexure; and

a plurality of solder bumps that are deposited on the slider backside, in a generally similar pattern to the pattern of the receptacles, wherein the receptacles and the solder bumps coincide when the slider and flexure are secured together, and wherein the solder bumps flow in corresponding receptacles when heated to form a rigid mechanical connection of the slider to the flexure, while also enabling the slider to be separated from the flexure.

2. The slider assembly of claim 1, wherein the first layer of the flexure includes a metallic bond pad made of a material that is compatible with a fluxless solder process.

3. The slider assembly of claim 2, wherein the metallic bond pad is made of gold plated copper.

4. The slider assembly of claim 1, wherein the plurality of flexure layers further include a second layer and a third layer.

5. The slider assembly of claim 4, wherein the second layer of the flexure

includes a polyimide insulator layer that provides electrical insulation between the first layer and the second layer.

6. The slider assembly of claim 5, wherein the polyimide insulator layer includes a leading edge that is recessed inward at a substantial distance relative to a leading edge tip of the flexure.

7. The slider assembly of claim 4, wherein the third layer of the flexure includes a stainless steel flexure tongue that provides resiliency to the slider assembly.

8. The slider assembly of claim 4, wherein the receptacles include depressions that are formed through the first and second flexure layers.

9. The slider assembly of claim 8, wherein the depressions are generally cylindrically shaped.

10. The slider assembly of claim 9, wherein each depression has a diameter that is approximately 75 microns.

11. The slider assembly of claim 4, wherein a slider leading edge is recessed relative to a leading edge tip of the flexure;

wherein the metallic bond pad includes an extension; and

wherein conductive adhesive is applied to the extension and the third flexure layer to create an electrical ground path between the slider and the flexure.

12. A method of forming a slider assembly for use in a data storage system, comprising:

forming a plurality of slider bars on a wafer, wherein each slider bar is comprised of a plurality of adjacently disposed sliders in such a manner that trailing edge surfaces of the sliders form a front side of the wafer;

forming a plurality of thin film data transducing elements and a plurality of electrical contact pads on the wafer front side;

dicing the slider bars from the wafer;

metallizing slider backsides on the slider bars;

applying a pattern of solder bumps onto metalized backsides of the slider bars; and

slicing the slider bars to form individual sliders.

13. The method of claim 12, further including assembling individual sliders to corresponding flexures.

14. The method of claim 13, wherein assembling the sliders and flexures includes patterning a plurality of receptacles on the flexure.

15. The method of claim 14, wherein assembling the sliders and flexures further includes matching the solder bumps to the receptacles.

16. The method of claim 15, wherein assembling the sliders and flexures further includes flowing the solder bumps at least in part within the receptacles.

17. The method of claim 16, further including positioning a data transducing element at about a center of the trailing edge surface of the slider.

18. The method of claim 17, further including forming slider air bearing surfaces on the slider bars.